

Citation for published version:

Wiltshire, G 2018, 'A case for critical realism in the pursuit of interdisciplinarity and impact', *Qualitative Research in Sport, Exercise and Health*, vol. 10, no. 5, pp. 525-542. <https://doi.org/10.1080/2159676X.2018.1467482>

DOI:

[10.1080/2159676X.2018.1467482](https://doi.org/10.1080/2159676X.2018.1467482)

Publication date:

2018

Document Version

Peer reviewed version

[Link to publication](https://doi.org/10.1080/2159676X.2018.1467482)

This is an Accepted Manuscript of an article published by Taylor & Francis in *Qualitative Research in Sport, Exercise and Health* on 08 May 2018, available online:
<http://www.tandfonline.com/10.1080/2159676X.2018.1467482>

University of Bath

Alternative formats

If you require this document in an alternative format, please contact:
openaccess@bath.ac.uk

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

A case for critical realism in the pursuit of interdisciplinarity and impact.

Dr Gareth Wiltshire, University of Bath, UK

Journal: Qualitative Research in Sport, Exercise and Health

Please note, this is a pre-publication version of the paper for open-access purposes and minor edits may appear in the published version.

Abstract

In recent years, much social scientific scholarship in sport, exercise and health (SEH) has repudiated (post)positivist research and has instead persuasively argued in favour of qualitative research from constructivist-interpretivist paradigmatic approaches. While this scholarship has enriched the field in numerous ways, this paper contends that constructivist-interpretivist assumptions elicit a *modus operandi* which is inimical to the accomplishment of two associated contemporary research agendas: interdisciplinarity and impact. In seeking an alternative philosophy of science, the purpose of this paper is to explore how critical realism (Bhaskar, 1975; 1979; 1989) – meta-theoretical position that has been somewhat absent to date in SEH research – might offer qualitative researchers a new conceptual framework with which greater interdisciplinarity and impact can be achieved. Two main critical realist claims are introduced: (1) the epistemic fallacy can be avoided by adopting a stratified ontology and judgemental rationality, and (2) social science would benefit from seeking causal explanations and using a transformational model of social activity. By de-coupling interpretive epistemologies from constructivist ontologies, it is argued that critical realism permits greater methodological plurality and hence can help transcend persistent paradigmatic boundaries. Indeed, by adopting a realist social ontology and complex, emergent conception of causality, this paper suggests that critical realism permits and encourages impact by asking researchers to focus on explaining the enduring social relations that produce real-world problems. The paper concludes by pointing out the limitations of critical realism and highlighting other ways that interdisciplinarity and impact can similarly be achieved.

Keywords: *qualitative, methodology, ontology, critical realism, interdisciplinarity, impact.*

Introduction

Social science scholarship related to sport, exercise and health (SEH) has been enriched by a substantial growth in qualitative research in the last several decades. To echo Giardina (2017), the conceptual and practical resources available to students and readers undertaking qualitative research in the field have never been stronger. Yet, in the context of what has been described as an expanding and shifting community of practice characterised, in part, by its multiplicity (Smith and Sparkes, 2016), it is important to be reminded that a number of challenges for qualitative researchers remain unresolved. In this paper, particular focus is given to two separate but associated challenges: interdisciplinarity and impact – challenges that are pertinent amidst clarion calls for our research to be better at making a difference (Silk, Bush and Andrews, 2010; Atkinson, 2011; Pringle and Falcous, 2016) and within the political context of contemporary academia (Evans, 2014).

The impact of research can be taken to mean “any identifiable benefit to or positive influence on the economy, society, public policy or services, culture, the environment or quality of life beyond academia” (HEFCE, 2016, p.4) and although the interpretation and measurement of impact is a matter of some debate (see Kay 2016), the basic premise that researchers want their work to make a difference in the ‘real world’ is one which is shared by many (Smith, 2018). While changing the world is a difficult task in itself, what makes matters more difficult is that the real-world challenges that researchers hope to address often transcend the otherwise engrained borders between the social and natural sciences as well as between disciplines within the social sciences. This is particularly the case when attempting to meet the demands of so-called ‘grand challenges’ (e.g. physical inactivity, mental ill-health, obesity, climate change etc.). To have impact, then, interdisciplinary research which seeks productive and harmonious collaboration across disciplines and across methodological traditions is likely to be essential. This may be especially challenging for qualitative researchers whose contribution to interdisciplinary teams has too often been reduced to being ‘tokenistic’ (Reich and Reich, 2006), relegated to secondary capacities (Sparkes, 2015), and undermined by historical, institutional hierarchies of power (Sparkes, 2013). Indeed, given that these hierarchies of power result in a lack of parity of access to high-impact journals (see the #BMJnoQual debate in Greenhalgh et al., 2016; Clark and Thompson, 2016) it is not surprising that interdisciplinarity and impact remain challenging for qualitative researchers.

To achieve greater interdisciplinarity, some have prompted the community to consider ‘border-crossing’ as a political strategy (Evans, 2014; Kay, 2016; Pringle and Falcous, 2016)

while others suggest the need to “find new strategic and tactical ways to work with one another” (Sparkes and Smith, 2013, p.242). Similarly, Phoenix et al. (2013) reflect on conducting research as part of an interdisciplinary team arguing for increasing our tolerance of different paradigms within research teams and to avoid framing interdisciplinary work within a single paradigm. Yet, Giardina (2017, p.265) rightly alerts us that we should not take lightly the tension that exists between “the necessity of undertaking funded research (which often comes with the price of making methodological concessions, especially to mixed methods) and maintaining epistemological and ontological coherence.” As such, by approaching interdisciplinarity in strategic and tactical ways, researchers will likely find themselves in the paradoxical position of trying to find practical commensurability while maintaining that paradigms are theoretically incommensurable. Hence, while these reflections are helpful in allowing researchers to meet the demands of interdisciplinarity in practice, they come with a sense of compromise and lack of philosophical reconciliation.

In search of a path through these challenges, this paper departs from the previous recommendations which have been explored elsewhere and instead makes the case for revisiting the constructivist-interpretivist paradigmatic orientations that have come to dominate qualitative research in SEH in recent years. As an alternative, this paper explores the potential of critical realism as meta-theoretical position within which qualitative research can be conceived of and produced. In doing so, one of the key objectives of this paper is to reflect on how ‘our own’ orientations (insofar as qualitative researchers in SEH can be thought of as such) might open new research opportunities and possibilities, yet may constrain our research in other important ways.

On the limits of constructivist-interpretivist paradigms

It is necessary to preface the case for critical realism with some reflections on the limitations of the constructivist-interpretivist orientations that are prevalent in the field. Prior to presenting these arguments, it is important to respectfully recognise and praise the research that has emerged from the qualitative community of practice in SEH with the deep understanding that much has been gained from its critical attention to complexity, richness, subjective lived experience and the like. Arguments are presented here not simply for the sake of negative critique, but with the aim of inviting reflection and discussion and in an attempt to speak to pertinent philosophical and practical issues.

While it should, of course, be acknowledged that qualitative research in SEH is far from a precisely defined ‘field’ with a homogenous approach to the research process, there are a number of common and general characteristics that have emerged over the last two decades. Gibson (2016, p 385), for example, notes that “qualitative research has often been deployed as a label for any research that takes place in opposition to postpositivism.” He goes on to describe qualitative research as,

rejecting postpositivism in favour of developing contextual understandings of meaning and lived experience based on, to varying degrees, levels of emphasis, and in various combinations, relativist ontologies, subjectivist epistemologies, and hermeneutic methodologies.

Indeed, while there may be numerous versions of interpretivism (Schwandt, 1998), many qualitative scholars have consistently defended their work on constructivist-interpretivist paradigmatic grounds which, as explained by Sparkes (2015, p.50), outline “a set of basic beliefs, and a worldview that defines, for its holder the nature of the world, our place in it, and the possible relationships we can have to this world and its parts”. The ‘nature of the world’ is a sentiment also invoked by Sparkes and Smith (2013, p.11) who make the argument that paradigmatic differences are grounded in ontological assumptions, claiming that “qualitative researchers adopt a relativist or internal ontology” which conceives of social reality as “humanly constructed and shaped in ways that make it fluid and multifaceted”. Indeed, Gill (2011, p. 307) claims, “[o]ne key assumption of qualitative research is that there is not one truth, but multiple truths.” While truth is an issue for both qualitative and quantitative research (Randall and Phoenix, 2009), for Sparkes and Smith (2013, p.14) these “basic philosophical differences” lead to “quantitative and qualitative researchers developing different research designs, using different techniques to collect different kinds of data, performing different types of analyses, representing their findings in different ways, and judging the ‘quality’ of their studies using different criteria.” This paradigmatic stance is shared by, Markula and Silk (2011, p.25) who write;

Paradigms are important because they provide the boundaries for the researcher’s ethics and values, actions in the social world, the control of the study (who initiates the work and asks questions), the voices deployed in the accounts of the research and, indeed, the very basic and fundamental understanding of the world the researcher is investigating.

This logic appears in tables and matrices (see Table 1) outlining how ontology corresponds to epistemology, which in turn corresponds with which methodology researchers ought to subscribe to in order to avoid unwanted ‘mixing and matching’ (Kellie, 2009). These examples suggest that there exists a somewhat established idea of what it is to *do* qualitative research and, perhaps, what it means to *be* a qualitative researcher, beyond simply an interest in non-numerical data or the use of particular techniques of data collection.

[INSERT TABLE 1 AROUND HERE]

Although paradigmatic frameworks have served to embolden and legitimise qualitative research, we must also remain aware of the pertinent critiques of paradigmatic thinking. Weed (2009a, p.313), for example, raises a number of concerns, not least of which is the charge that Kuhn’s (1970) oft-cited *The Structure of Scientific Revolutions* may have been misinterpreted and hence the “idea of ‘competing paradigms’ would appear to be a misnomer”. That aside, it may also be argued that the boundaries produced and propagated through paradigmatic commitments ensure that the *differences* in research approaches remain well nourished. Thus, it could be argued that these paradigmatic boundaries elicit a *modus operandi* which can be inimical to the accomplishment of both interdisciplinarity and impact. Boundaries are antithetical to interdisciplinarity and they may be especially felt for researchers who position qualitative research as part of a ‘worldview’ belonging to researchers themselves (i.e. “the concern with *one’s own* epistemology and ontological grounding” (Giardina and Laurendeau, 2013, p.244) emphasis added). This speaks to the ways in which we come to understand our own subjectivities as researchers whereby appropriated paradigm boundaries come to be lived, felt and performed – a situation for which we ought to be cautious. Gard (2009), for example, warns of “complacent alliances” between “like minds”, and Weed (2009, p.316) raises concerns about ‘protectionist’ paradigmatic behaviour.

It is not suprising, then, that when researchers with different paradigmatic assumptions attempt to collaborate, a number of problems can arise. Issues with working across research traditions bear out in the 2011 special issue of this journal on qualitative-quantitative divisions (Smith and Brown, 2011) as well in more recent articles concerning exercise as medicine (see Williams and Gibson, 2017; Williams et al., 2017; Pullen and Malcolm, 2017; Caddick and Smith, 2017). Williams and Gibson’s (2017) paper, for example, presents a fictional exchange between a critical social scientist and an exercise physiologist. As a response to critical comments made by the social scientist, the physiologist retorts, “I could

have guessed that you would want to talk about negatives, and some sort of ‘isation’. You lot always do.” (p.10). Furthermore, Stambulova (2016, p.452) writes about her experiences working with quantitative sport psychologists:

The problem is that many career researchers with positivist and postpositivist backgrounds are preoccupied with research objectivity and find it difficult to shift to the constructionist type of thinking, with more open and interactive dialogues, the possibility of alternative interpretations.

For some, these vivid examples of disciplinary conflict reflect “ignorance” about qualitative research (Gibson, 2016, p.382) and a “blinding arrogance” (Smith and Sparkes, 2013, p.238) to privileging one’s own approach over others’ – something which both qualitative and quantitative researchers may be guilty of. However, Pringle and Falcous’s (2016) self-reflexive call for greater interdisciplinarity extends these points and argues for revisiting philosophy too. Reflecting on the sociology of sport, they note that “our predominant epistemological beliefs may be a factor that limits our ability to make a difference” (p. 4). They suggest that,

there might be value in promoting greater use of quantitative, mixed method and interdisciplinary research approaches with the natural sciences. We acknowledge that our call runs counter to the epistemological orthodoxies in the field, and we feel a certain discomfort in doing so (p. 3).

Without a rapprochement of the kind that Pringle and Falcous suggest involving the negotiation of certain personal ‘discomforts’ and conflicts, qualitative researchers – and therefore rigorous qualitative research itself – will likely be omitted from interdisciplinary work.

Furthermore, as many qualitative researchers deploy constructivist-interpretivist (as well as post-modernist) arguments that problematise scientific evidence and, indeed, the very concept of truth itself, it may be difficult to work with colleagues who subscribe to the notion that legitimate problems exist and that a firm stance should be taken on their importance. It is here that both impact and interdisciplinarity intersect though ontological and epistemological disputes. Social constructivist arguments are presented by Sparkes and Smith (2013) who cite Digwell’s (1992) assertion that “[t]here are no diseases in nature, merely relationships between organisms... diseases are produced by the conceptual schemes imposed on the natural world by human beings.” These social constructivist arguments appear in Evans and Colls’s (2009) critical take on obesity, which is referred to – not as a disease, but – as “a

socially constructed and contested ‘problem’”. Similarly, Pike (2011) mobilises Foucauldian-inspired critiques of “truth” to problematize physical activity promotion for older adults. These ideas have become so prevalent that Gard (2011) warns us of the dangers of SEH social scientists adopting an orthodoxy of obesity science scepticism by default.

While it is not the intention of this paper to advance a whole-scale critique of these positions, my point is simply that these arguments make it very difficult (if not impossible) for qualitative researchers who endorse constructivist-interpretivist approaches to collaborate with researchers seeking to address grand challenges such as obesity and physical inactivity. How can constructivist-interpretivist researchers possibly collaborate with researchers committed to truth claims? How can (and why would) researchers embark on grand challenges when those challenges are merely constructions? Clearly, constructivist-interpretivist critiques of ‘objective science’ are valid and important, yet they remain far more effective at demonstrating what knowledge *should not* be trusted than guiding what knowledge *should* be trusted, rendering it difficult for readers and scholar-activists to take a stance on crucial issues.

Not long ago, it appeared very understandable that Sparkes (2013, p.442) would charge George W. Bush’s presidential administration of promoting “narrowly defined governmental regimes of truth” at the expense of multiple, competing truths. Five years on, however, scholars are showing more demur about the appeal of multiple, competing truths amidst the advent of the so-called ‘post-truth’ era often associated with the ‘populist’ political victories of Donald Trump and Brexit (see Gore’s (2016) provocative use of Calcutt’s (2016) article). Indeed, Bruno Latour, as one of the most proactive anti-science scholars since the late 1970s, has more recently reflected on the need to re-frame critiques of truth in light of such arguments. He writes, “Was I wrong to participate in the invention of this field known as science studies? Is it enough to say that we did not really mean what we said? Why does it burn my tongue to say that global warming is a fact whether you like it or not?” (Latour, 2004, p.227).

The limits of the constructivist-interpretivist position have also recently been problematised when confronted with material phenomena. Drawing heavily on feminist New Materialist scholarship (see Barad, 2003), Fullagar (2017, p.249) explains that

interpretive approaches have assumed that the source of embodied meaning lies ‘within’ the subject as an agentic being; these include psychological theories of self-determination through to more phenomenological accounts of sensory experience of the world.

Fundamentally, this is because such assumptions are foregrounded by a certain humanistic anthropocentrism which “hierarchically privileges subjective human realities and constructions” (Ferrado, 2013, p.29). These ontological questions about the embodied self have led Sparkes and Smith (2011, p.366) to note, “the notion of narrative as a bio-social phenomenon allows for a bridge to be built between two different theoretical positions that might loosely be labelled ‘critical realism’ and ‘social constructivism’.”

Building on from these anthropocentric critiques we can see how constructivist-interpretivist assumptions also make it difficult to generalise by their insistence on the highly subjective, situated and interpreted status of phenomena. As such, while Kay (2016, p.425) is well justified in stating that “there is no mismatch or conflict between qualitative research and impact,” there is a strong case to argue that there is a mismatch between constructivist-interpretivist paradigmatic positions and impact. This may partially be because the pursuit of solutions to real-world problems implies that researchers are able to make somewhat generalisable statements and must be willing to propose new ways of doing things, be they policies, programmes or practices that can be subject to future scrutiny. By rejecting realism in some form, constructivist-interpretivist scholars risk facing the long-established charge against relativism that it “makes radical criticism impossible, and in doing so seems to be self-refuting” (Edgley, 1998, p.396). As, Archer (1998, p.193) asserts, this is evident in,

the rhetorical montage of Foucauldian aspect, whose verificatory collage works by persuasion without any context of justification, yet is immune to critique. Attempt the latter and rhetoric beats a quick epistemic retreat – it is *merely* rhetorical, one image in a new world which allows a thousand images to bloom, privileging their plurality and counselling us to increase our tolerance of incommensurability.

Collier (1994, p.14) is similarly sceptical about relativistic claims because they are rendered to be “invulnerable to any criticism based on the claim that the facts are different.” He adds that in recent years interpretivism has “enabled the theorist to say ‘since I am not claiming objective truth for my theories, I can go on saying what I like, and your counter-examples have no relevance for me’.”

These questions may be challenging for the constructivist-interpretive positions that deny the possibility of truth, further questions could be raised when these positions come to be reflected in the purposes of research. It is commonplace, for example, for qualitative

researchers to celebrate the notion that the “purpose of research is to offer just one of many possible interpretations” (Brocki and Weardon, 2006, p.98). Indeed, Sparkes and Smith (2013, p.12) explicitly state that, “[t]he job of qualitative researchers... is to acknowledge and report these different realities by relying on the voices and interpretations of the participants through extensive quotes, presenting themes that reflect the words and actions of participants, and advancing evidence of different perspectives on each theme.” While these aims will likely lead to rich, complex, nuanced accounts of experiences, it may be important to be reminded that nuance ought not to be heralded as an ultimate virtue on our inquiries (Healy, 2016) and that explanatory theories are currently lacking. According to Archer (1998, p.194) this approach, “detaches social ontology from explanatory methods and practical social theories.” In other words, for qualitative research to be more effective at ‘making a difference,’ perhaps it is necessary to move beyond the search for rich, nuanced, complex interpretations of phenomena (although these are still needed) and towards explaining how social phenomena come to be.

Amongst this disquiet is an opportunity to revisit the philosophical ground upon which qualitative research is frequently based and to seek robust alternatives to the constructivist-interpretivist paradigms that allow us to maintain our research integrity without placing unnecessary limits on our practices. To this end, Rutzou (2016) summarises the state of play for many in the social sciences, particularly critical realists:

We find ourselves at once moving beyond notions of the universal, emerging from postmodern deconstruction, and moving towards an era of re-construction. No longer are we concerned with ‘the anarchist farewell to modernity’ (Habermas, 1987, 4), instead we are concerned with welcoming and creating new forms of solidarity, of moving beyond the deconstruction of totalities and the highlighting of limitations towards new possibilities; possibilities which now have a difficult task of moving beyond ‘naive’ conceptual schemes operating on principles of closure, ‘simple’ representations, ‘simple’ assertions of laws or ‘simple’ conceptions of reality. A social science able to effectively function in a complex world.

The remaining sections of this paper, therefore, seek to address this aim by outlining some of the basic claims of critical realism and exploring how they might benefit qualitative researchers seeking interdisciplinarity and impact.

Critical realism

While a succinct definition of critical realism is likely to disingenuously simplify what is a diverse assemblage of ideas, it is somewhat unified in its attempt to develop a robust and coherent philosophy of social science capable of eschewing the perceived limitations of both positivism and interpretivism. As Archer et al. (2016, p.4) explain, critical realists highlight a dissatisfaction with,

scientistic forms of positivism concerned with regularities, regression-based variables models, and the quest for law-like forms; and also to the strong interpretivist or postmodern turn which denies explanation in favor of interpretation, with a focus on hermeneutics and description at the cost of causation.

At this point, it is important to emphasise that this paper provides a somewhat general reading of critical realism grounded in the work of Roy Bhaskar – in particular *A Realist Theory of Science* (1975), *The Possibility of Naturalism* (1979) and *Reclaiming Reality* (1989) – and that nuances, controversies and debates are available for exploration elsewhere (Archer et al., 1998; Collier, 1994; CSO, 2017; CRN, 2017). Indeed, it is also worth noting that some of the conclusions that are arrived at here in relation to interdisciplinarity and impact may be achieved through similar arguments not posited by critical realists specifically.

From this foundation, notable scholars have advanced and developed critical realism beyond (and oftentimes critical of) Bhaskar. The work of Archer (1982; 1995; 2013) and Porpora (1987; 2015) in sociology, Lawson (1997; 2003) in economics, Collier (1994) in philosophy and Sayer (1984; 2000) in methodology have profoundly contributed to the emergence of critical realism as an important philosophy in contemporary social science. More recently, critical realism has been used to underpin Scambler's (2001; 2013; Scambler and Scambler, 2015) research on health and illness, Elder-Vass's (2010; 2012) theories of social structure, Bailey's (2009a; 2009b) account of social democracy, and Brock and Carrigan's (2015) causal explanation of protest activism. Indeed, Bhaskar's critical realism (together with other works of realist philosophy) foregrounds the growing method of Realist Evaluation (Pawson and Tilley, 1997; Pawson, 2006; 2013) being widely used to evaluate policy initiatives and interventions as they play out in diverse, complex real-world settings (see. Clarke et al., 2007; Greenhalgh et al., 2009; Wong et al., 2016).

Yet, there is a remarkable absence of critical realism in key SEH textbooks (Smith and Sparkes, 2016; Sparkes and Smith, 2013; Atkinson, 2011; Young and Atkinson, 2012; Markula and Silk, 2011; Phoenix and Smith, 2013; Armour and MacDonald, 2012) for

students and readers alike to draw on. Where it is included, it is, at best, mentioned in passing and never discussed in relation to Bhaskar's wider philosophical debates. Despite this, there appears to be a groundswell of interest in critical realism emerging from prominent journals in the field (*Qualitative Research in Sport, Exercise and Health; Sociology of Sport Journal; Sport Education and Society; Leisure Studies; International Review for the Sociology of Sport; Journal of Sport and Exercise Psychology*). A number of studies have explicitly used critical realism to orient in their research in Physical Education (Simmons and Mclean, 2016), the sociology of sport (Sugden, 2010; Philpotts, 2010; Green, 2004), sports management (Byers, 2007; 2013) and, most evidently, sport and exercise psychology (Plataeu et al., 2014; Keegan et al, 2014; Ronkainen et al., 2015; Figgins et al., 2016; Swann et al., 2016; Schweickle et al., 2017; de Grace et al., 2017; Amoutiviska et al., 2017). While this suggests a growing interest in critical realism, there remains little dedicated discussion around the philosophical arguments that it makes. Literature that does dedicate space to philosophical arguments is helpful (see Downward, 2005; Downward et al., 2006; Downward et al., 2002; Weed, 2009b; 2010; 2017; Byers et al., 2007; 2013) yet requires further support in the context of considering how critical realism might be mobilised to assist researchers while they navigate the contemporary challenges of interdisciplinarity and impact.

The epistemic fallacy, stratified ontology and judgemental rationality

Among qualitative researchers in SEH, the assertion that constructivist ontologies necessitate interpretivist epistemologies holds strong. Markula and Silk (2011, p.36), for example, are very clear that “interpretive approaches all assume a subjective ontology and thus they cannot be used together with positivist approaches that are based on objectivity”. This assertion entails the idea that “we create phenomena” through our research activities (Ringrose and Rawlings, 2015, p.87), and that “the measurement of psychological variables is itself one more way of making them real, of constructing them” (Willig, 2001, p.8 cited in Sparkes, 2015, p. 50-51). However, for Bhaskar, statements like these appear in interpretivist (as well as positivist) writings and commit what is referred to as the ‘epistemic fallacy’ – that is, collapsing questions of epistemology with questions of ontology.

A common articulation of the importance of ontology goes as follows; “ontological questions and positions are no laughing matter, and therefore before anyone can embark on a quest to know something, they must possess an idea about what can be known at all”

(Atkinson, 2012, p.148). Here, the epistemic fallacy is evident in the articulation of ontology (*reality*) through a statement about *knowledge* (epistemology). Similarly, Whaley and Krane (2011, p.396) describe ontology as referring to the “nature of being” and then quickly make the statement, “*epistemology* determines what researchers accept as the truth or as *real*” [emphasis added] and in doing so slip between ontology and epistemology seamlessly. The literature is replete with such examples. This may be because, as St Pierre (2013, p.647) explains, “ontology – always so difficult to think differently – was eclipsed to a great extent by what seemed to be urgent epistemological concerns in the last half of the twentieth century.” The tendency towards the epistemic fallacy is perhaps most evident in the use of the term ‘onto-epistemology’ which Giardina (2016) and Fullagar (2017) both borrow from Barad (2007) to describe “the study of the intertwined practices of knowing and being” cementing the “inseparability” of ontology and epistemology in conceptual terms (Barad, 2007, p. 409, cited in Giardina, 2016).

In agreement with interpretivist qualitative research, critical realism acknowledges that the practices of scientific activity are always fallible as a result of being bound up with imperfect observational methods – be they sensory (autoethnographic, phenomenological), discursive (interviews, focus groups etc.), experimental (randomised controlled trials) or otherwise. As Bhaskar (1975, p.16) writes "knowledge is a social product, produced by means of antecedent social products". However, critical realism maintains that this is an epistemological point, not an ontological one. As, Archer (2007, p.195) states;

explanation of social matters requires the generic assertion that there is a state of the matter which is what it is, regardless of how we do view it, choose to view it or are somehow manipulated into viewing it. This precludes any collapse of the ontological into the epistemological and convicts those who endorse this move of the epistemic fallacy, namely confusing what is with what we take it to be.

This separation is conceived of in Bhaskar’s stratified ontology (see Table 2) entailing three the domains of the *empirical*, the *actual*, and the *real*. This *empirical* domain of *experience* is conceived of as operating on a different level to actual events themselves. In making this move, critical realism immediately breaks with qualitative traditions that assume interpretivist epistemologies are the logically necessary result of constructivist ontologies (and *vice versa*) as depicted in Table 1. In this way, critical realism combines and reconciles ontological realism and epistemological interpretivism (Bhaskar, 1989).

[INSERT TABLE 2 AROUND HERE]

Ostensibly, the distinction between ontology and epistemology allows for the fact that events may occur without observation, or may be “exercised unrealised” (Archer, 2007, p.190). In asserting this, experiences remain highly interpreted, fluid and relative to human agents as are the empirical activities of science, yet these experiences are ‘out of phase’ (Bhaskar, 1975) with the actual events that occur which – unless we are talking about pure inventions of the imagination – occur independently of perception. Succinctly, if a tree falls in a forest and nobody is around to hear it, it does indeed still make a sound. However, as Maxwell (2012, p.9) writes, “while critical realism rejects the idea of ‘multiple realities,’ in the sense of independent and incommensurable worlds that are socially constructed by different individuals or societies, it is quite compatible with the idea that there are different valid *perspectives* on reality.” In the absence of ontological and epistemological separation, researchers must rely on “an ontology based on the category of experience” (Bhaskar, 1989, p.97). As Archer (1998, p.199) insists, “there is no warrant for confining social causes to the mental or to meanings”. This is the case for social structures (institutions, policies, organisation etc.), culture (people, practices, artefacts etc.) and matter (bodies, buildings, environment etc.) – their construction, fluidity and plurality does not equate to an ontological status that resides merely in the perceptions of individuals.

This stratified ontology is troubling for critics of critical realism on a number of grounds (see Chalmers, 1988, King, 1999), but perhaps most obviously because “we cannot talk about the reality beyond our knowledge claims, and so questions about reality become questions about knowing reality” (Cruickshank, 2004). However, thinking through the idea of a stratified ontology permits researchers to acknowledge a sense of realism in spite of the obvious interpretive epistemic processes at hand. As Clark et al. (2007, p.525) put it “critical realism attempts to find the truth as a goal which avoids judgemental relativism (all beliefs are of equal truth value) while retaining the view that human knowledge is socially produced.” Further, in Bhaskar’s (1998) terms,

A core tenet of critical realism is that claims to truth are resolved and compared through discussion and debate that seeks, on a rational basis, to identify those findings/beliefs that appear to be truthful.

As such, critical realism endorses a ‘judgemental rationality’ whereby theorising, philosophising and rationalising can lead to satisfactory conclusions, although these may be for-the-time-being conclusions in the Popperian sense. Research may not reveal the ‘true’

reasons why social problems exist, but the language of judgemental rationality will certainly aid researchers in showing how some claims are more true than others. Indeed, since impact is likely to rest on the notion that there are actual problems (to the best of our knowledge) to which we can find actual (evidence-based) solutions, one must at some point acknowledge the ontological status of phenomena (social and natural) at hand as real. Without relinquishing a healthy scepticism towards the hierarchical structures that produce scientific knowledge, a critical conception of reality may help qualitative researchers take a stance on matters to the best of our knowledge working with others towards real-world problems in a way that the constructivist-interpretivist positions can preclude.

A further point is to suggest that de-coupling ontology from epistemology is a good starting point for resolving the methodological differences that constructivist-interpretivist paradigms espouse. Quite simply, empirical observations made through our varied methods are relegated to the empirical domain and seen as indicators of phenomena but not necessarily phenomena themselves thus demonstrating that methodological diversity do not equate to epistemological and ontological incoherence. As Maxwell (2012, p. 103) explains, "data are usefully seen as not simply "texts" to be interpreted, or as the "constructions" of participants (although they are this), but as evidence for real phenomena and processes (including mental phenomena and processes) that are not available for direct observation." Therefore, in contrast to 'methodolotry' or 'method fetishism' (Chamberlain, 2000; 2011) critical realism takes what has been described as a "pragmatic" (but not *pragmatist*) orientation towards methods which "does not discard *a priori* methods that have shown some ability to increase our understanding of the world" (Maxwell, 2012, p.10). Indeed, Pawson and Tilly (1997, p.85) assert, "we are whole-heartedly pluralists when it comes to the choice of method." In this way, Rutzou (2015, p.6) explains,

The trained ethnographic eye (an instrument) is able to bring to light certain relations, patterns, habits, and dispositions which would otherwise go unnoticed. The interviewer is able to disclose what takes place in someone's head through free or guided discussion and is able to get at the reasons, thoughts and feelings of an agent or actor which would otherwise remain hidden. A regression analysis is able to highlight certain trends and, while not providing law-like regularities, may support and even start to quantify and lend credence to other theories, which might otherwise be lacking in evidence.

Once the separation of epistemology and ontology is understood, it becomes enlighteningly easy to accept and work with research across different so-called paradigms. Hence, using neuroscience to investigate poverty (Hair et al., 2015) or the use of randomised

controlled trials alongside qualitative methods to investigate social-class disparities in educational attainment (Francis et al., 2017) becomes absent of paradigmatic conflict on ontological grounds. Critical realism may be a particularly apposite resource to achieve interdisciplinarity because in his later work Bhaskar wrote extensively on interdisciplinarity as it related to diverse research topics such as disability studies (Bhaskar and Danemark, 2007), climate change (Bhaskar et al., 2010) and wellbeing (Bhaskar et al., 2018). There may be, of course, a number of other factors that prevent interdisciplinary work from taking place but it is hoped that recognising the epistemic fallacy and promoting methodological pluralism can at least help diffuse this one.

Seeking causal explanations with the transformational model of social activity

Now that the separation of ontology and epistemology has been outlined, it is possible to explore how Bhaskar's conceptualisation of social structure may allow research to seek causal explanations and lead to a greater attention to research impact. This is crucial because for causal explanations to hold any value at all we must first have a conception of social ontology which accounts for both agency and structure. While the stratified ontology discussed earlier can be applied to the philosophy of science in general, critical realism further adopts a specific realist conceptualisation of social structure. In doing so, critical realism does not deny that we have individual experiences and perceptions, but it offers a conception of how those experiences are made manifest by the social conditions that are real and existing. Agency is not neglected within the critical realist conception of causality but it is part of an ongoing iteration with the social conditions around us (Elder-Vass, 2010) often involving internal conversational reflexivity (Archer, 2003). As such, social contexts become important to the understanding of cause because they provide the conditions within which agency can be enacted. While there are hints of realism emerging from qualitative research, Smith's (2010, p.99) account of constructivist-interpretivist narrative research demonstrates a difficulty and reluctance engage with realism *per se*;

while narrative researchers accept that there are physical beings out there moving around in time and space and uttering in interviews what he or she calls stories, they claim that the interpretations/descriptions they or anybody else offers of these movements and utterances are not out there in the sense of being independent of their interests and purposes.

While positions like this are perhaps borne out of the important critiques of

positivism, scientism and naïve realism, it is neither necessary nor advisable to claim that the existence of social phenomena is dependent upon our interests and purposes as researchers. In contrast to constructivist-interpretivist arguments, Sayer (1984, p.49) says of social objects that, “although social phenomena cannot exist independently of actors or subjects, they usually do not exist independently of the particular individual who is studying them.” In this case, Archer (2007, p.135) explains;

this absence of ontological depth precludes crucial questions about the conditions under which experience is possible to agency (observing a cherry tree in England depends on its prior importation from China, just as experiencing educational discrimination is posterior to a given definition of achievement being institutionalised, or owing rent depends upon antecedent relationships between landlords and tenants).

Thus, critical realism puts forward the idea that social phenomena pre-exist our experiences of them. In *The Possibility of Naturalism* (1979), Bhaskar outlines the different ways in which social theory has conceived of social structure. He explains that we have come to understand the problematic conceptualisations of the Durkheimian ‘collectivist and reified’ stereotype (Society → Individual) and Weberian ‘volunteristic’ stereotype (Individual → Society) which most closely aligns with interpretivism. Moreover, while Berger’s ‘dialectical’ conception (Figure 1) succeeds in avoiding previous errors and encompassing structure and agency he argues that this model presents society as an “objectification and externalisation of human beings” and that human beings are in turn the “internalisation or reappropriation in consciousness of society” (p.33). In its place, he advances a *transformational model of social activity* (TMSA) (Figure 2) which states that:

society must be regarded as an ensemble of structures, practices and conventions which individuals reproduce or transform, but which would not exist unless they did so. Society does not exist independently of human activity (the error of reification). But it is not the product of it (the error of voluntarism).

In this way, Bhaskar’s TMSA does not deterministically reify society, nor does it say that agents create society. Rather, agents can only ever *reproduce* or *transform* it. He goes on to say,

People, in their conscious activity, for the most part unconsciously reproduce (and occasionally transform) the structures governing their substantive activities or production. Thus people do not marry to reproduce the nuclear family or work to sustain the capitalist economy. Yet it is nevertheless the unintended consequence (and inexorable result) of, as it is also a necessary condition for, their activity (Bhaskar,

1979, p.35).

[INSERT FIGURE 1 AROUND HERE]

[INSERT FIGURE 2 AROUND HERE]

This TMSA follows an essentially Marxian idea that societies are irreducible to people which advocates moving from an understanding of social phenomena "as conceptualised in the experience of the social agents concerned, to the essential relations that necessitate them" (Bhaskar, 1979 p.26). To provide an example, Sayer (1984, p.105) explains that the powers of a lecturer "are not reducible to her characteristics as an individual but derive from her interdependent relations with students, colleagues, administrators, employer, spouse, etc." What we are left with, then, is a heightened responsibility to take seriously the "the persistent relations between individuals (and groups), and with the relations between these relations (and between such relations and nature and the products of such relations)" (Bhaskar, 1979). Of course, it is important to acknowledge that this realist social ontology is not unique to critical realism. Bourdieu's objectivist accounts of social structure are synthesised in Elder-Vass's (2010) critical realist theoretical work and Mingers (2004) provides a persuasive account of the similarities between the TMSA and Giddens' theory of structuration.

By reclaiming 'reality' from the social constructivist positions it is possible to demonstrate how qualitative researchers can hold more firm ground upon which impactful research impact can be claimed. By articulating social phenomena through the transformational model of social activity, it is possible to recognise that agents and researchers are implicated in the objects that are under investigation without submitting to the notion of 'producing' or 'creating' those objects. This contrasts with constructivist-interpretivist positions which compromise the notion that social problems have an ontological status antecedent to individual experiences of those problems and that such social problems will be common to other individuals across space and time where objective social relations endure. This critical realist claim permits qualitative researchers to move beyond an emphasis on highly subjective, interpreted lived experiences and towards revealing how persistent relations and social positions produce such experiences which are 'out there'. This increases our generalisability because relations are persistent in societies with reproductive tendencies. In short, there is a reality to social constructionism (Elder-Vass, 2012).

From this foundation, social science can begin to talk about social structures as causal but must avoid deterministic, linear and simplified descriptions of cause. Critical realists and interpretivists alike strongly disagree with the positivist notion of causality based on the idea that interactions in the social world are quite different to interactions in the physical world. Positivistic research is embedded with a version of causality, which, put crudely, contends that the observation of constant conjunctions between two events is our best basis for determining a causal relationship. Yet, as Bhaskar (1998, p.14) contends,

As the world is open, and agency is real, and as society is only materially present in intentional human action, it follows that social phenomena only ever manifest themselves in open systems.

Succinctly put by Archer (1998, p.189); “football players are doing something quite differently from billiard balls”. However, critical realists are similarly dissatisfied with the constructivist-interpretivist approach which tends to avoid causality altogether. To offer an alternative, the critical realist conception of causality is underpinned by the highest domain in Bhaskar’s stratified ontology: that of the *real* in which causal *mechanisms* with potential powers and properties exist. This is important because research inquiry becomes “a quest for non-observable generative mechanisms whose powers may exist unexercised or be exercised unrealised” (Archer, 1998, p.190). It must be assumed that “structures and mechanisms, then, are real and distinct from the patterns of events that they generate; just as events are real and distinct from the experiences in which they are apprehended” (Bhaskar, 1975, p.56). By separating out the domain of the real in which causal potential resides, Bhaskar avoids the mistake of assuming that associated observed events are causally related (as in Humean constant conjunctions) or that causality resides in the idiosyncrasy of interpreted individual experience.

For critical realism, causality is complex, context-dependent and can emerge from interrelated entities. Sayer (1984) asserts that research should not seek the succession of discrete events (cause and effect) but find the ‘causal powers’ or ‘liabilities’ of objects or relations, or more generally their ways-of-acting or ‘mechanisms’. He goes on to say, “to ask for the cause of something is to ask what ‘makes it happen’, what ‘produces’, ‘generates’, ‘creates’ or ‘determines’ it, or, more weakly, what ‘enables’ or ‘leads to’ it” (Sayer, 1984 p.104/5). Thus while committing to the notion of causality, critical realism “acknowledges that phenomena exist and operate within open systems and, accordingly, a plethora of different contexts and mechanism can affect outcomes” (Clarke, et al., 2007, p.524).

However, rather than using the ideas of complexity and context as things that prevent generalizable research to take place, Sayer (1984, p.115) suggests that that contexts can provide important insights into generative mechanisms: "instead of looking for similarities between situations in which a common result occurs, we sometimes seek causes by looking for differences between situations in which different results occur."

To deal with the complexity of multiple causation, Bhaskar introduces the concept of "emergence" (or "synchronic emergence") which addresses the question of how different parts of a complex system work in combination to cause events. As Archer (1998, p.192) notes, "to talk about emergent properties is simply to refer to those entities which come into being through social combination". Similarly Clark (2013, p.192) explains that social causes,

are formed of parts that can be material, human, theoretical, social, or procedural in nature, stratified into higher and lower realms, that exercise power individually, in combination or as emergent properties either as parts or through the powers of the parts and the whole.

Therefore, it is important to "examine how elements of the open system interact to influence outcomes" (Clark, 2007, p.527) in such a way that we can say that "the relationship between causal powers or mechanisms and their effects is therefore not fixed, but contingent" (Sayer, 1984, p.107).

Crucially, as critical realism is not merely an empirical enterprise, causal explanation must be achieved through retrodution. As Sayer, (1984, p.107) asserts,

Merely knowing that 'C' has generally been followed by 'E' is not enough: we want to understand the continuous process by which 'C' produced 'E', if it did. This mode of inference in which events are explained by postulating (and identifying) mechanisms which are capable of producing them is called 'retrodution'

Thus, causal mechanisms exist only in abstract terms as accounts which best explain the tendencies (also referred to as demi-regularities) that empirical observations reveal. A causal mechanism becomes "a theory which spells out the potential of human resources and reasoning" (Pawson and Tilley, 1997, p.68).

For critical realists, causality is crucial if we are to move towards explanatory methodologies and it assumes a conception of causality which sees social action as a complex, and contingent product of social relations whose causal influence operates above the level of the empirical. Pawson and Tilley's (1997) summary in the context of realist

evaluation is worth quoting at length,

The basic task of social inquiry is to explain interesting, puzzling, socially significant regularities (R). Explanation takes the form of positing some underlying mechanism (M) which generates the regularity and thus consists of propositions about how the interplay between structure and agency has constituted the regularity. Within realist investigation, there is also investigation of how the workings of such mechanisms are contingent and conditional, and thus only fired in particular local, historical or institutional contexts (C).

The critical realist conception of causality might help re-frame the purpose of qualitative research and open up new opportunities to positively benefit the social phenomena that we study. Grounded in Bhaskar's assertion that understanding causality has emancipatory potential, Clark et al. (2012, p.2) note that “[e]xplanation matters” and it is needed for the “capacity of research to improve outcomes”. Qualitative researchers in SEH might be encouraged by examples of critical realism being applied in other fields to achieve impact. To offer one example, Clark *et al.* (2007) describe how their critical realist approach was fruitful in researching prevention programmes for Coronary Heart Disease in Scotland. In their research, qualitative methods were used to understand the mechanisms that lead to improved outcomes, which were only causally linked to those outcomes when situated in particular contexts. They embraced complexity and used a range of methodological tools which led findings such as “the effectiveness of the programme was determined less by programme content, than by social and corporeal experiences of attending and longer-term health opportunities to exercise safely” (p.532). Such findings spoke to the research (knowledge) needs of practitioners, patients and policy makers and the authors were able to generate lessons for the prevention of heart disease in Scotland and suggest changes for future programmes accordingly.

For qualitative researchers in SEH, the critical realist conception of causality may allow for greater claims to be made about the impact of our work and may open up new possibilities to legitimately seek out causal explanations about the phenomena that we study. As has been outlined, causal explanations are achieved through a theoretical (non-empirical) process of retroductive reasoning aimed at revealing (or at least claiming) how events come to be within complex, open systems. For social scientists, this is important because it entails the possibility that research into causal mechanisms is likely to be accomplished through both qualitative and theoretical means and hence raising the status and importance of our research findings. While quantitative methods with large sample sizes are excellent at drawing

attention to regularities giving insight into objects of inquiry, Sayer (1984, p.114) argues that “qualitative information is needed on the nature of the objects involved and not merely more quantitative data on empirical associations” (Sayer, 1984, p.114). Once we arrive at causal explanations, we are in a better position to make recommendations about policies and practices that have problematic consequences for the lives of people and social groups. Causal explanations are needed in order to make a difference.

Conclusion

This paper set out to contribute to current debates about interdisciplinarity and impact among qualitative researchers through exploring some of the basic the meta-theoretical claims of critical realism. By providing a brief outline of these arguments, this paper has – at the very least – offered readers an insight into philosophical debates which are relatively absent in SEH literature. Two main critical realist claims have been introduced: (1) the epistemic fallacy can be avoided by adopting a stratified ontology and judgemental rationality, and (2) social science would benefit from seeking causal explanations underpinned by a transformational model of social activity. By de-coupling interpretive epistemologies from constructivist ontologies, it is argued that critical realism permits greater methodological plurality and hence can help transcend paradigmatic boundaries. Indeed, adopting a judgemental rationality may help us take a stance on issues and work with colleagues committed to evidence-based claims. Furthermore, by adopting a realist social ontology and complex, emergent conception of causality, this paper suggests that critical realism permits and encourages impact by asking researchers to focus on explaining the enduring social relations that produce real-world problems. In these ways, it has been argued that critical realism could begin to answer some of the common criticisms of qualitative research and better position qualitative researchers seeking greater interdisciplinarity and impact.

While the arguments offered are intended as food for thought in and of themselves, it is hoped that the introduction of key authors (Bhaskar, Archer, Lawson and Pawson among others) serves as useful signposting for further reading. Alternatively, on the premise that not all qualitative researchers in SEH subscribe to constructivist-interpretivist arguments, the value of this paper may be in providing a philosophy and language through which to understand and articulate the positions that they implicitly already hold. As such, questions

about what counts as proper qualitative research have been problematised with an implicit provocation that our methods need not be grounded in constructivist-interpretivist prerequisites.

It would, of course, be remiss to not alert readers to the pertinent critiques of critical realism for the purpose of seeking transparent debate and inviting counter argument. Although a deeper interrogation is beyond what can be achieved here, useful critiques can be found elsewhere which questions how critical realism slips between different definitions of ontology (Cruikshank, 2004), accuses it of being unclear about how other theories can fit within critical realism as a ‘meta-theory’ (Graça Moura and Martins, 2008) and arguing that philosophy need not precede empirical science (Kemp, 2005). If, as this paper suggests, there is a need for an alternative to the philosophical foundations of much qualitative work being done in SEH, then there is also a need to take seriously the hostility towards critical realism too.

It should also be acknowledged that excellent solutions to the challenges of interdisciplinarity and impact are being offered elsewhere and that critical realism is not the only route which leads to these conclusions. It is encouraging, for example, to read Fitzgerald et al.’s (2015) attempt to make the division (rather than the combination) of sociology and biology seem strange. Indeed, in search of productive collaboration this present paper builds on and contributes to the essentially interdisciplinary debates around mixed method (or multiple method) research that already exist (Moran, 2011; Sparkes, 2015) and serve to highlight the common ground between different methodological traditions (Berry, 2011). Furthermore, Smith’s (2018) recent account on the generalisability of qualitative research speaks to the issues around impact that this paper tries to address.

As a result of the advancement in qualitative research in recent years, researchers are likely to be well versed in the critical realist tendencies towards complexity, context, open systems and the necessity to theorise beyond empirical observations. However, as critical realism calls into question many of the underlying assumptions in constructivist-interpretivist qualitative research, any interest in critical realism by qualitative researchers in practice is likely to involve a story about coming to terms with realism as a concept which is not antithetical to the social sciences and the social justice goals we seek.

Acknowledgements

I would like to show gratitude to the two reviewers of this paper whose comments were encouraging, searching and challenging in equal measure. Additionally, I would like to thank David Aldous and Cassie Phoenix for providing feedback on an early draft of this paper and also to Brett Smith for generously sharing his insightful ideas on the key issues in this debate.

References

- Archer, M., ed., 2013. *Social morphogenesis*. London: Springer.
- Archer, M., Decoteau, C., Gorski, P., Little, D., Porpora, D., Rutzou, T., Smith, C., Steinmetz, G. and Vandenberghe, F., 2016. What is Critical Realism? *Perspectives*, 38(2), 4–9.
- Archer, M., 1982. Morphogenesis versus structuration: on combining structure and action. *The British journal of sociology*, 33(4), 455-483.
- Archer, M., 1998. Introduction: Realism in the social sciences. In: Archer, M., Bhaskar, R., Collier, A., Lawson, T. and Norrie, A., eds. *Critical realism: Essential readings*. London: Routledge, 189-205.
- Archer, M., 2007. The ontological status of subjectivity: the missing link between structure and agency. In: Lawson, C., Latsis, J. and Martins, N., eds. *Contributions to Social Ontology*. London: Routledge, 17-31.
- Archer, M., Bhaskar, R., Collier, A., Lawson, T. and Norrie, A., eds., 1998. *Critical realism: Essential readings*. London: Routledge.
- Archer, M., 1995. *Realist Social Theory: The morphogenetic approach*. Cambridge: Cambridge University Press.
- Armour, K., and MacDonald, D., eds., 2012. *Research methods in physical education and youth sport*. London: Routledge.
- Arnautovska, U., O’Callaghan, F., and Hamilton, K., 2017. Applying the Integrated Behavior Change Model to Understanding Physical Activity Among Older Adults: A Qualitative Study. *Journal of Sport and Exercise Psychology*, 39(1), 43–55.
- Atkinson, M. 2011. *Key Concepts: Research Methods in Sport, Exercise and Health Science*. London: Sage
- Bailey, D. J., 2009a. *The Political Economy of European Social Democracy: A critical realist approach*. London: Routledge.
- Bailey, D. J., 2009b. The Transition to ‘New’ Social Democracy: The Role of Capitalism, Representation and (Hampered) Contestation. *The British Journal of Politics & International Relations*, 11(4), 593-612.
- Barad, K., 2003. Posthumanist performativity: toward an understanding of how matter comes to matter. *Signs*, 28(3), 801–831.
- Barad, K., 2007. *Meeting the universe halfway*. Durham, NC: Duke University Press.
- Baskhar, R., 1975. *A realist theory of science*. London: Routledge.
- Berry, T., 2011. Qualitative researchers as modern day sophists? Reflections on the qualitative-quantitative divide. *Qualitative Research in Sport, Exercise and Health*, 3(3), 324–328.
- Bhaskar, R., 1979. *The possibility of naturalism: A philosophical critique of the contemporary human sciences*. London: Routledge.
- Bhaskar, R., 1989. *Reclaiming Reality*. London: Verso.

- Bhaskar, R., and Danermark, B., 2006. Metatheory, interdisciplinarity and disability research: a critical realist perspective. *Scandinavian Journal of Disability Research*, 8(4), 278-297.
- Bhaskar, R., Danermark, B., and Price, L., 2018. *Interdisciplinarity and Wellbeing: A Critical Realist General Theory of Interdisciplinarity*. London: Taylor & Francis.
- Bhaskar, R., Frank, C., Hoyer, K. G., Næss, P., and Parker, J., 2010. *Interdisciplinarity and climate change: Transforming Knowledge and Practice for Our Global Future*. London: Routledge.
- Brock, T., and Carrigan M., 2015. Realism and Contingency. *Journal For The Theory Of Social Behaviour* [serial online], September 45(3), 377-396.
- Brocki, J. M., and Wearden, A. J., 2006. A critical evaluation of the use of interpretative phenomenological analysis (IPA) in health psychology. *Psychology & Health*, 21(1), 87-108.
- Byers, T., 2013. Using critical realism: A new perspective on control of volunteers in sport clubs. *European Sport Management Quarterly*, 13(1), 5-31.
- Byers, T., Henry, I., and Slack, T., 2007. Understanding control in voluntary sport organisations. In: Parent, M., and Slack, T., eds. *International perspectives on the management of sport*. Londdon: Elsevier. 269-286.
- Caddick, N. and Smith, B., 2017. Exercise is medicine for mental health in military veterans: a qualitative commentary. *Qualitative Research in Sport, Exercise and Health*, 1-12.
- Calcutt, A., 2016. The surprising origins of 'post-truth' – and how it was spawned by the liberal left, *The Conversation* [online], Available online at <http://theconversation.com/the-surprising-origins-of-post-truth-and-how-it-was-spawned-by-the-liberal-left-68929> [accessed 10th January 2018].
- Campos, P. F., 2004. *The obesity myth: Why America's obsession with weight is hazardous to your health*. New York: Penguin.
- Chalmers, A., 1988. 'Is Bhaskar's Realism Realistic?', *Radical Philosophy*, 49: 18-23.
- Chamberlain, K., 2000. Methodolatry and qualitative health research. *Journal of Health Psychology*, 5(3), 285-296.
- Chamberlain, K., 2011. Troubling methodology. *Health psychology review*, 5(1), 48-54.
- Clark, A., 2013. What are the components of complex interventions in healthcare? Theorizing approaches to parts, powers and the whole intervention. *Social Science and Medicine*, 93, 185-193.
- Clark, A., MacIntyre, P. and Cruickshank, J., 2007. A critical realist approach to understanding and evaluating heart health programmes. *Health*, 11(4), 513-539.
- Collier, A., 1994. *Critical realism: an introduction to Roy Bhaskar's philosophy*. London: Verso.
- CRN, 2018. Critical Realism Network [online], available from: <http://criticalrealismnetwork.org/> [accessed 10th January 2018].
- Cruickshank, J. (2004). A tale of two ontologies: An immanent critique of critical realism. *Sociological Review*, 52(4), 567-585.
- CSO (2018) The Centre for Social Ontology [online], Available from <http://socialontology.org/> [accessed 10th January 2018].
- de Grace, L. A., Knight, C. J., Rodgers, W. M., and Clark, A., 2017. Exploring the role of sport in the development of substance addiction. *Psychology of Sport and Exercise*, 28, 46-57.
- Downward, P., Finch, J. and Ramsay, J., 2002. Critical realism, empirical methods and inference: a critical discussion. *Cambridge Journal of Economics*, 26(4), 481-500.
- Downward, P., 2005. Critical (realist) reflection on policy and management research in sport, tourism and sports tourism. *European sport management quarterly*, 5(3), 303-320.

- Downward, P., Dow, S. and Fleetwood, S., 2006. Transforming economics through critical realism. *Journal of critical realism*, 5(1), 139-182.
- Edgley, R., 1998. Reason as dialectic: Science, social science and socialist science, In: Archer, M., Bhaskar, R., Collier, A., Lawson, T. and Norrie, A., eds., *Critical realism: Essential readings*. London: Routledge.
- Elder-Vass, D., 2010. *The causal power of social structures: Emergence, structure and agency*. Cambridge: Cambridge University Press.
- Elder-Vass, D., 2012. *The reality of social construction*. Cambridge: Cambridge University Press.
- Evans, J., 2014. Ideational border crossings: rethinking the politics of knowledge within and across disciplines. *Discourse: Studies in the Cultural Politics of Education*, 35(1), 45–60.
- Ferrando, F., 2013. Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms: Differences and Relations. *Existenz*, 8(2), 26-32.
- Figgins, S. G., Smith, M. J., Sellars, C. N., Greenlees, I. A., and Knight, C. J., 2016. “You really could be something quite special”: A qualitative exploration of athletes’ experiences of being inspired in sport. *Psychology of Sport and Exercise*, 24(2016), 82–91.
- Fitzgerald, D., Rose, N., and Singh, I., 2015. Revitalising Sociology: Urban Life and Mental Illness between History and the Present. *British Journal of Sociology*, 67(1), 138–160.
- Francis, B., Archer, L., Hodgen, J., Pepper, D., Taylor, B. and Travers, M.C., 2017. Exploring the relative lack of impact of research on ‘ability grouping’ in England: A discourse analytic account. *Cambridge Journal of Education*, 47(1), 1-17.
- Fullagar, S., 2017. Post-qualitative inquiry and the new materialist turn: implications for sport, health and physical culture research. *Qualitative Research in Sport, Exercise and Health*, 9(2), 247-257.
- Gard, M., 2010. *The end of the obesity epidemic*. London: Routledge.
- Gard, M. and Wright, J., 2005. *The obesity epidemic: Science, morality and ideology*. London: Routledge.
- Giardina, M. D., 2017. (Post?)qualitative inquiry in sport, exercise, and health: notes on a methodologically contested present. *Qualitative Research in Sport, Exercise and Health*, 9(2), 258–270.
- Giardina, M. D. and Laurendeau, J., 2013. Truth Untold? Evidence, Knowledge, and Research Practice(s). *Sociology of Sport Journal*, 30, 237–255.
- Gibson, K., 2016. Mixed method research in sport and exercise: integrating qualitative research, In: Smith, B. and Sparkes, A., eds. *Routledge handbook of qualitative research in sport and exercise*. London: Taylor & Francis. 382-396.
- Gill, D., 2011. Beyond the qualitative – quantitative dichotomy: notes from a non-qualitative researcher. *Qualitative Research In Sport, Exercise and Health*, 3(3), 37–41.
- Gore, J., 2016. *Reconciling educational research traditions*, Australian Association for Research in Education, 2016, Melbourne Cricket Ground, Melbourne. Available online at <https://www.aare.edu.au/pages/2016-conference-mcg-melbourne-vic-.html> [accessed 10th January 2018].
- Graça Moura, M. da., and Martins, N., 2008. On some criticisms of critical realism in economics. *Cambridge Journal of Economics*, 32(2), 203–218.
- Green, M., 2004. Power, policy, and political priorities: Elite sport development in Canada and the United Kingdom. *Sociology of Sport Journal*, 21(4), 376–396.
- Greenhalgh, T., Hughes, J. and London, C. 2009. How Do You Modernize a Health Service? A Realist Evaluation of Whole-Scale Transformation in London. *The Milbank Quarterly*, 87(2), 391–416.

- Greenhalgh, T., Annandale, E., Ashcroft, R., Barlow, J., Black, N., Bleakley, A., ... Ziebland, S., 2016. An open letter to The BMJ editors on qualitative research. *BMJ*, 352. <http://doi.org/10.1136/bmj.i563>
- Hair, N.L., Hanson, J. L., Wolfe, B. L., Pollak, S. D., 2015. Association of child poverty, brain development, and academic achievement. *JAMA Pediatrics*, 169(9), 822-829.
- Healy, K., 2016. Fuck nuance. *Sociological Theory*, 35(2), 118-127.
- HEFCE., 2016. Higher Education Funding Council for England, Publication patterns in research underpinning impact in REF2014: a report to HEFCE by Digital Science, Available online at: http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/Independentresearch/2016/Publication_patterns_in_research_underpinning_impact_in_REF2014/2016_refimpact.pdf [accessed 8th January 2018].
- Kay, T., 2016. Knowledge, not numbers: qualitative research and impact in sport, exercise and health. In: Smith, B. and Sparkes, A. eds., *Routledge handbook of qualitative research in sport and exercise*. London: Routledge.
- Keegan, R. J., Spray, C. M., Harwood, C. G., and Lavalley, D. E., 2014. A qualitative synthesis of research into social motivational influences across the athletic career span. *Qualitative Research in Sport, Exercise and Health*, 6(4), 537–567.
- Kellie, J., 2009. What can interdisciplinarity offer to policy problems? Understanding the public policy of obesity. *European Political Science*, 8(1), 47-56.
- King, A., 1999. 'The Impossibility of Naturalism: The Antinomies of Bhaskar's Realism', *Journal for the Theory of Social Behaviour*, 29 (3): 267–288.
- Kuhn, T., 1970. *The Structure of Scientific Revolutions*, Chicago: University of Chicago Press.
- Latour, B., 2004. Why has critique run out of steam? From matters of fact to matters of concern. *Critical inquiry*, 30(2), 225-248.
- Lawson, T., 1997. *Economics and Reality*. London: Routledge.
- Lawson, T., 2003. *Reorienting Economics*. London: Routledge.
- Markula, P., and Silk, M. L., 2011. *Qualitative research for physical culture*. Basingstoke: Palgrave Macmillan.
- Maxwell, J. A., 2012. *A realist approach for qualitative research*. London: Sage.
- Moran, A. P., Matthews, J. J., and Kirby, K., 2011. Whatever happened to the third paradigm? Exploring mixed methods research designs in sport and exercise psychology. *Qualitative Research in Sport, Exercise and Health*, 3(3), 362–369.
- Pawson, R., 2006. *Evidence-Based Policy: A Realist perspective*. Thousand Oaks, CA: Sage
- Pawson, R., 2013. *The Science of Evaluation: A Realist Manifesto*. Thousand Oaks, CA: Sage
- Pawson, R. and Tilley, N., 1997. *Realistic Evaluation*. Thousand Oaks, CA: Sage.
- Phillpots, L., Grix, J., and Quarmby, T., 2010. Centralized grassroots sport policy and “new governance”: A case study of County Sports Partnerships in the UK - unpacking the paradox. *International Review for the Sociology of Sport*, 46(3), 265–281.
- Phoenix, C. and Smith, B., eds., 2013. *The world of physical culture in sport and exercise: Visual methods for qualitative research*. London: Routledge.
- Phoenix, C., Osborne, N., Redshaw, C., Moran, R., Stahl-Timmins, W., Depledge, M., Fleming, L. and Wheeler, B., 2013. Paradigmatic approaches to studying environment and human health: (Forgotten) implications for interdisciplinary research. *Environmental Science & Policy*, 25, 218–228.
- Plateau, C. R., McDermott, H. J., Arcelus, J., and Meyer, C., 2014. Identifying and preventing disordered eating among athletes: Perceptions of track and field coaches. *Psychology of Sport and Exercise*, 15(6), 721–728.
- Porpora, D. V., 1987. *The concept of social structure*. New York: Greenwood Press.

- Porpora, D. V., 2015. *Reconstructing sociology: The critical realist approach*. Cambridge University Press.
- Pringle, R., and Falcous, M., 2016. Transformative research and epistemological hierarchies: Ruminating on how the sociology of the sport field could make more of a difference. *International Review for the Sociology of Sport*, June 2016.
- Pullen, E. and Malcolm, D., 2017. Assessing the side effects of the ‘exercise pill’: the paradox of physical activity health promotion. *Qualitative Research in Sport, Exercise and Health*, 1-12.
- Reich, S.M., Reich, J.A., 2006. Cultural competence in interdisciplinary collaborations: a method for respecting diversity in research partnerships. *American Journal of Community Psychology* 38, 51–62.
- Ringrose, J. and Rawlings, V., 2015. Posthuman performativity, gender and “school bullying”: Exploring the material-discursive intra-actions of skirts, hair, sluts, and poofs. *Confero: Essays on Education, Philosophy and Politics*, 3(2), 80-119.
- Ronkainen, N. J., Tikkanen, O., Littlewood, M., and Nesti, M. S. 2015. An existential perspective on meaning, spirituality and authenticity in athletic careers. *Qualitative Research in Sport, Exercise and Health*, 7(2), 253–270.
- Rutzou, T., 2016. Re-Imagining Social Science. *Journal of Critical Realism*, 15(4), 327-341.
- Sayer, A., 1984. *Method in Social Science: a realist approach*. London: Routledge.
- Sayer, A., 2000. *Realism and Social Science*. London: Sage.
- Scambler, G. 2001. Critical realism, sociology and health inequalities: social class as a generative mechanism and its media of enactment. *Alethia*, 4(1), 35-42.
- Scambler, G., 2013. Resistance in unjust times: Archer, structured agency and the sociology of health inequalities. *Sociology*, 47(1), 142-156.
- Scambler, G. and Scambler, S., 2015. Theorizing health inequalities: The untapped potential of dialectical critical realism. *Social Theory & Health*, 13(3-4), 340-354.
- Schwandt, T. A., 1998. Constructivist, interpretivist approaches to human inquiry. In: Denzin, N. K., and Lincoln, Y. S. *The landscape of qualitative research: Theory and issues*. Thousand Oaks, CA: Sage. 118-137.
- Schweickle, M., Groves, S., Vella, S. A., and Swann, C., 2017. The effects of open vs. specific goals on flow and clutch states in a cognitive task. *Psychology of Sport and Exercise*, 33, 45–54.
- Silk, M., Bush, A. and Andrews, D., 2010. Contingent intellectual amateurism, or, the problem with evidence based research, *Journal of Sport and Social Issues*, 34(1), 105-128.
- Simmons, J. and MacLean, J., 2016. Physical education teachers’ perceptions of factors that inhibit and facilitate the enactment of curriculum change in a high-stakes exam climate. *Sport, Education and Society*, 23(2), 1–17.
- Smith, B., 2010. Narrative inquiry: ongoing conversations and questions for sport and exercise psychology research. *International Review of Sport and Exercise Psychology*, 3(1), 87–107.
- Smith, B., 2018. Generalizability in qualitative research: misunderstandings, opportunities and recommendations for the sport and exercise sciences. *Qualitative Research in Sport, Exercise and Health*, 10(1), 137-149.
- Smith, B., and Sparkes, A., eds., 2016. *Routledge handbook of qualitative research in sport and exercise*. London: Taylor & Francis.
- Smith, B., and Brown, D., 2011. Editorial. *Qualitative Research in Sport, Exercise and Health*, 3(3), 263–265.
- Sparkes, A., 2013. Qualitative research in sport, exercise and health in the era of neoliberalism, audit and New Public Management: understanding the conditions for

- the (im)possibilities of a new paradigm dialogue, *Qualitative Research in Sport, Exercise and Health*, 5(3), 440-459
- Sparkes, A., 2015. Developing mixed methods research in sport and exercise psychology: Critical reflections on five points of controversy. *Psychology of Sport and Exercise*, 16(3), 49–59.
- Sparkes, A., and Smith, B., 2011. Inhabiting different bodies over time: Narrative and pedagogical challenges. *Sport, Education and Society*, 16(3), 357–370.
- Sparkes, A., and Smith, B., 2013. *Qualitative research methods in sport, exercise and health: From process to product*. London: Routledge.
- St. Pierre, E. A., 2013. The posts continue: becoming. *International Journal of Qualitative Studies in Education*, 26(6), 646–657.
- Stambulova, N., 2016. A look at the future of qualitative research through the prism of of athletic career research. In: Smith, B. and Sparkes, A., eds., *Routledge handbook of qualitative research in sport and exercise*. London: Routledge. 450-461.
- Sugden, J., 2010. Critical left-realism and sport interventions in divided societies. *International Review for the Sociology of Sport*, 45(3), 258–272.
- Swann, C., Keegan, R., Crust, L., and Piggott, D., 2016. Psychological states underlying excellent performance in professional golfers: “Letting it happen” vs. “making it happen.” *Psychology of Sport and Exercise*, 23, 101–113.
- Weed, M., 2009a. The structure of (social) scientific contradictions: a commentary on the problem of paradigmatic behaviour by social scientists. *Qualitative Research in Sport and Exercise*, 1(3), 312–321.
- Weed, M., 2009b. Research quality considerations for grounded theory research in sport & exercise psychology. *Psychology of Sport and Exercise*, 10(5), 502–510.
- Weed, M., 2010. A quality debate on grounded theory in sport and exercise psychology? A commentary on potential areas for future debate. *Psychology of Sport and Exercise*, 11(6), 414–418.
- Weed, M., 2017. Capturing the essence of grounded theory: the importance of understanding commonalities and variants. *Qualitative Research in Sport, Exercise and Health*, 9(1), 149–156.
- Whaley, D. E., and Krane, V. 2011. Now that we all agree, let’s talk epistemology: a commentary on the invited articles. *Qualitative Research in Sport Exercise and Health*, 3(3), 394–403.
- Williams, O. and Gibson, K., 2017. Exercise as a poisoned elixir: inactivity, inequality and intervention. *Qualitative Research in Sport, Exercise and Health*, 1-17.
- Williams, T.L., Hunt, E.R., Papathomas, A. and Smith, B., 2017. Exercise is medicine? Most of the time for most; but not always for all. *Qualitative Research in Sport, Exercise and Health*, 1-16.
- Wong, G., Westhorp, G., Manzano, A., Greenhalgh, J., Jagosh, J., and Greenhalgh, T., 2016. RAMESES II reporting standards for realist evaluations. *BMC Medicine*, 14(1), 96.
- Young, K., and Atkinson, M., 2012. *Qualitative research on sport and physical culture*. Bingley, UK: Emerald Group Publishing.